

CLAIMS

What is claimed is:

1. A method of mounting a motor to a base, comprising:
 - (a) providing a motor with a first tooling feature, an assembly fixture with a second tooling feature, and a base with a motor opening;
 - (b) placing the motor in the assembly fixture such that the first and second tooling features engage each other to position the motor in a desired orientation;
 - (c) moving the assembly fixture toward the base;
 - (d) aligning and installing the motor in the motor opening of the base with the assembly fixture; and then
 - (e) securing the motor to the base with fasteners and removing the motor from the assembly fixture.
2. The method of claim 1, wherein step (b) comprises inserting a tooling pin of the second tooling feature into a tooling hole of the first tooling feature.
3. The method of claim 1, wherein step (b) comprises preventing rotation of the motor relative to the assembly fixture by engaging the first and second tooling features.
4. The method of claim 1, wherein step (d) further comprises positioning a cable of the motor on an exterior of the base and the motor on an interior of the base.
5. The method of claim 1, wherein step (a) comprises positioning the first tooling feature on one side of the motor and a set of motor fastener holes on an opposite side of the motor.

6. The method of claim 1, wherein steps (b) through (e) comprise manually assembling the motor to the base.

7. The method of claim 1, wherein steps (c) and (d) comprise robotically manipulating the assembly fixture.

8. A method of mounting a spindle motor to a base of a hard disk drive, comprising:
- (a) providing a spindle motor with a hub, a first tooling feature, and fastener holes, an assembly fixture with a receptacle and a second tooling feature, and a base with a motor opening and fastener holes;
 - (b) placing the hub of the spindle motor in the receptacle of the assembly fixture such that the first and second tooling features engage each other to position the spindle motor in a desired orientation and prevent rotation of the spindle motor relative to the assembly fixture;
 - (c) moving the assembly fixture toward the base;
 - (d) installing the spindle motor in the motor opening of the base with the assembly fixture such that the fastener holes of the spindle motor and of the base align, and a cable of the spindle motor is located on an exterior side of the base and the hub is located on an interior side of the base; and then
 - (e) securing the spindle motor to the base with fasteners and removing the hub of the spindle motor from the receptacle in the assembly fixture.
9. The method of claim 8, wherein step (b) comprises inserting a tooling pin of the second tooling feature into a tooling hole of the first tooling feature.
10. The method of claim 8, wherein step (a) comprises positioning the first tooling feature on one side of the spindle motor and the fastener holes of the spindle motor on an opposite side of the spindle motor.
11. The method of claim 8, wherein steps (b) through (e) comprise manually assembling the spindle motor to the base.

12. The method of claim 8, wherein steps (c) and (d) comprise robotically manipulating the assembly fixture.